

CSF

The Belgian

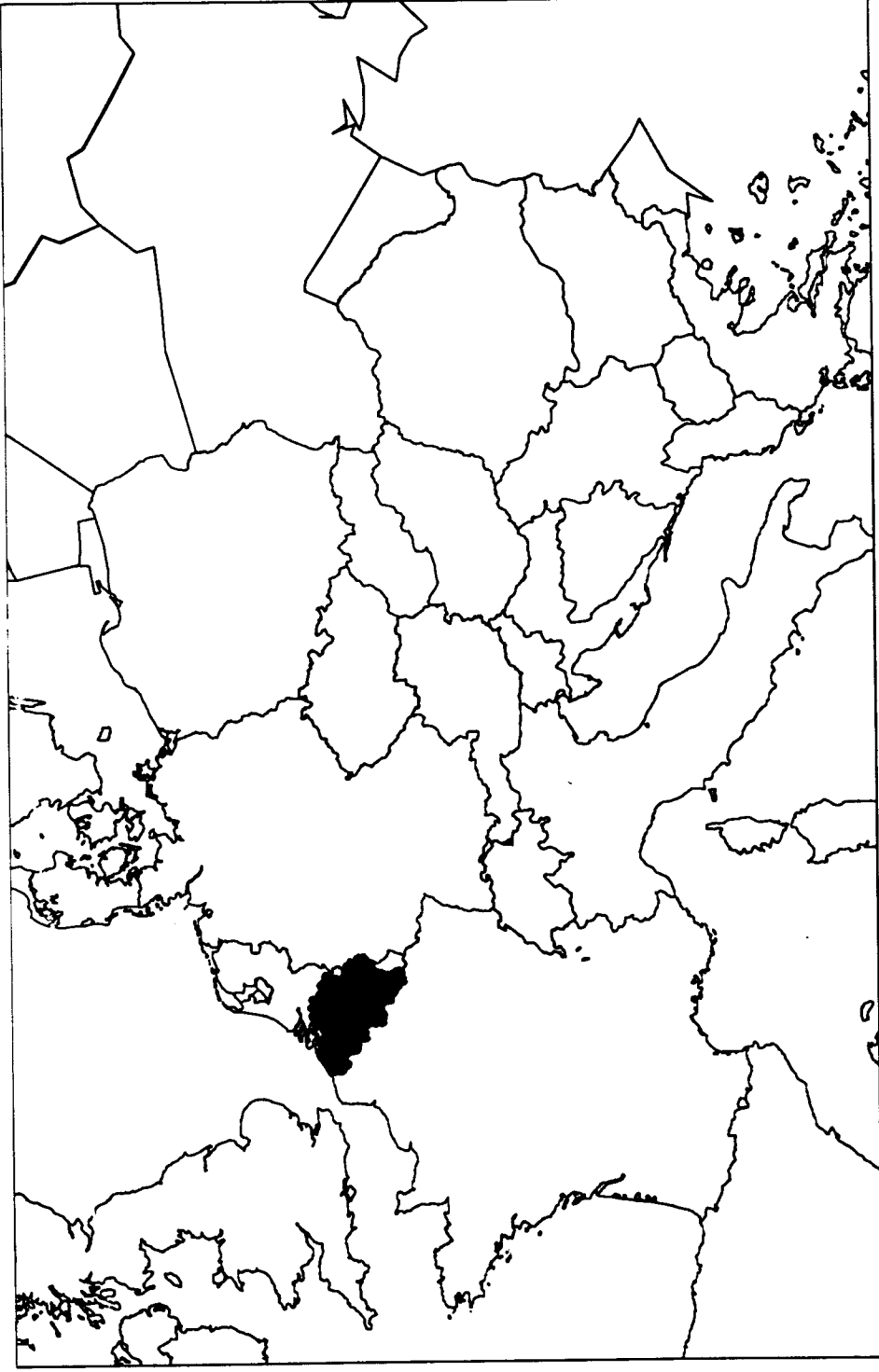
experience

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KINGDOM OF BELGIUM
MINISTRY OF AGRICULTURE



Veterinary Services



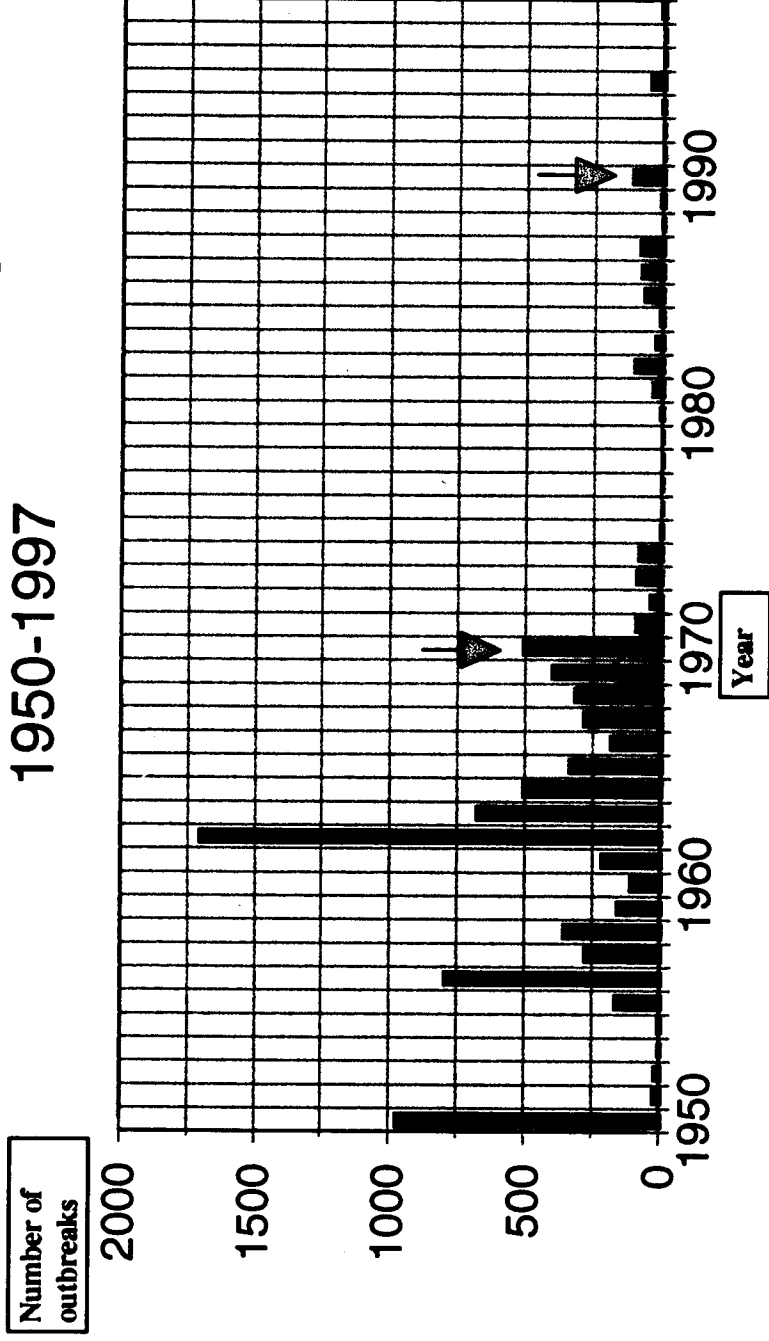
Veterinary Service



MINISTRY OF AGRICULTURE

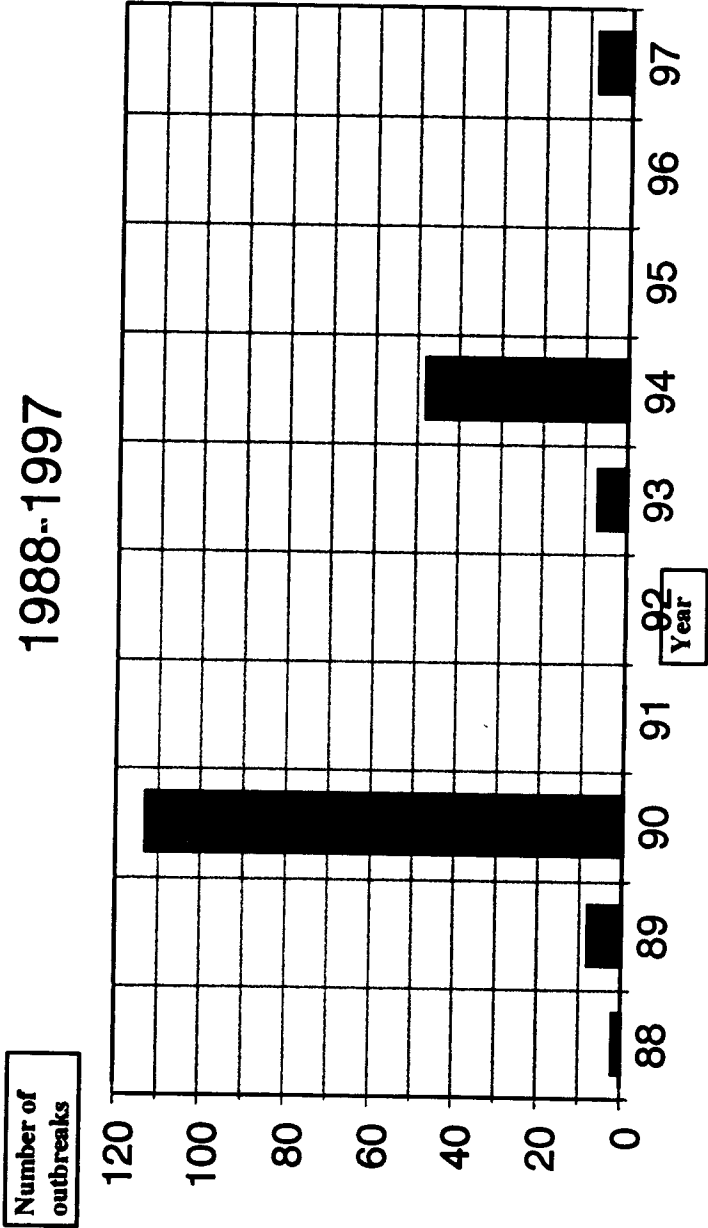
CSF Outbreaks in Belgium

1950-1997



CSF Outbreaks in Bel

1988-1997



CHARACTERISTICS BELGIAN PIGHUSBANDRY

1. Livestock:

13.500 pigfarms

7.5 mio pigs

yearly import of 1.4 mio piglets

2. Concentration:

northern part: 95 %

Western-Flanders: 51 %

3. Integrated production structures

4. Specialisation

5. Self-sufficiency rate: 200%

export mainly pigmeat

CSF EXPERIENCES

1990 : control under 80/217/CEE +
Community decisions

	NUMBER OF FARMS	NUMBER OF PIGS	COSTS
OUTBREAKS	113	153.949	0,786 bill BEF
PREV.ERADICATION	476	239.059	1,360 bill BEF
MARKET SUPPORT	-	778.870	4,700 bill BEF
TOTAL	-	1.200.000	8,400 bill BEF

main problems:

first epizootic in high density area
destruction capacity
loss of markets
poor support of the farmers



CSF EXPERIENCES

1993-1994 : control under
80/217/CEE modified
by 91/685/CEE

regionalised disease control

EPIZOOTIC WEST-FLANDERS	NUMBER OF FARMS	NUMBER OF PIGS	COSTS
OUTBREAKS	7	13.121	0,622 bill BEF
PREV.ERADICATION	177	127.878	
MARKET SUPPORT	-	105.813	0,543 bill BEF
EPIZOOTIC EAST-FLANDERS	NUMBER OF FARMS	NUMBER OF PIGS	COSTS
OUTBREAKS	48	78.561	0,834 bill BEF
PREV.ERADICATION	149	104.165	
MARKET SUPPORT	-	358.087	1,538 bill BEF
TOTAL	381	787.625	3,888 bill BEF



BELGIQUE 1990

PESTE PORCINE CLASSIQUE

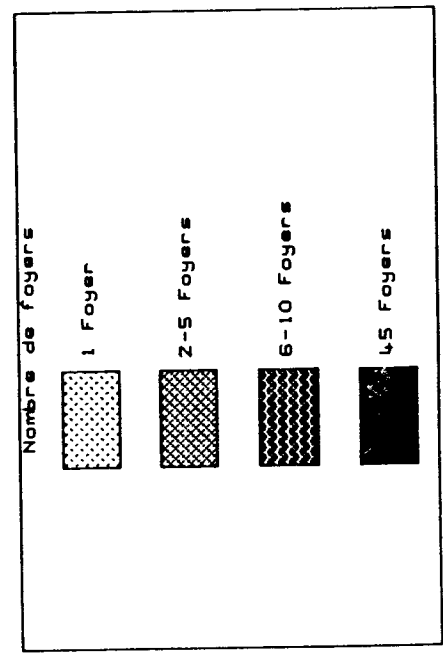
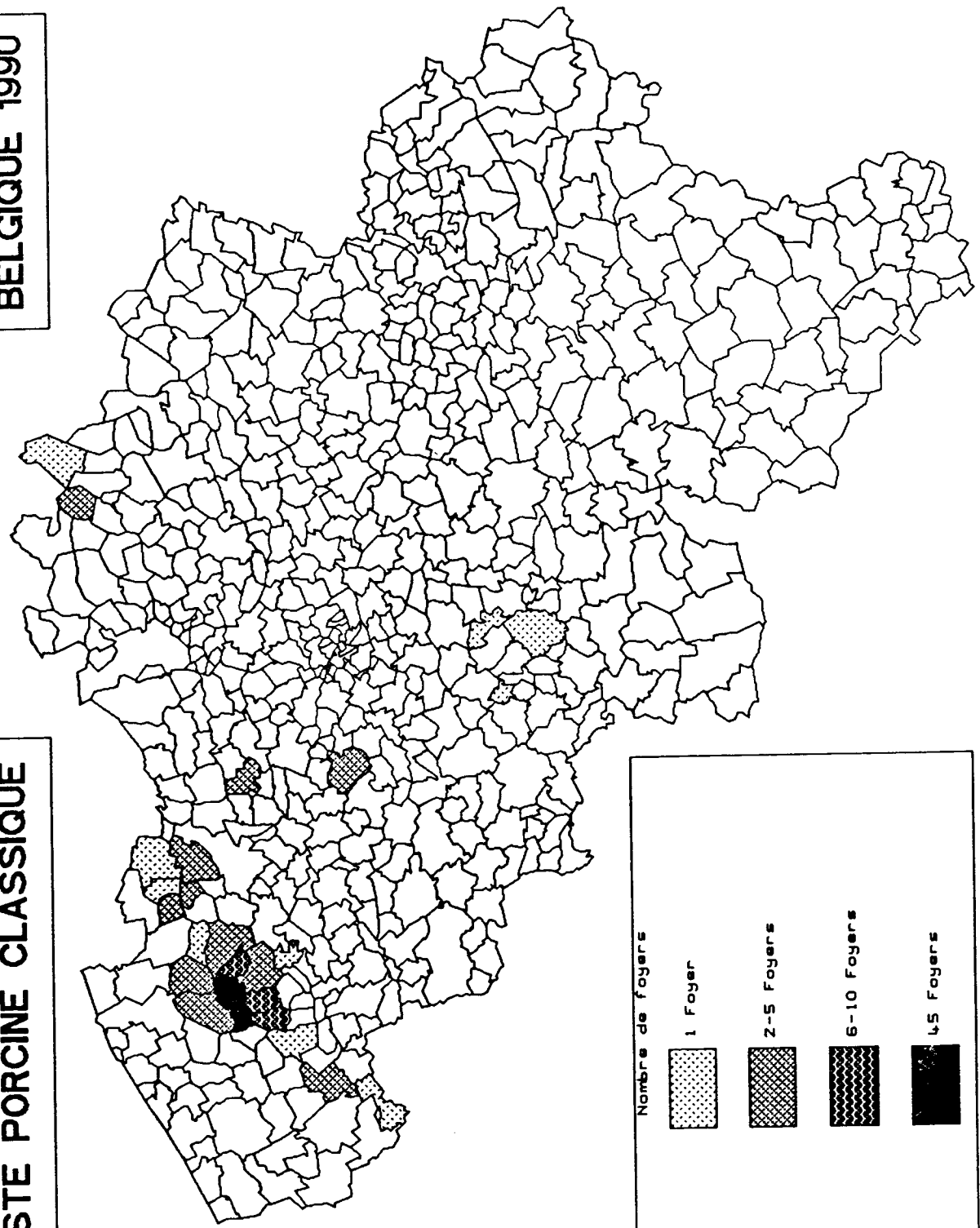
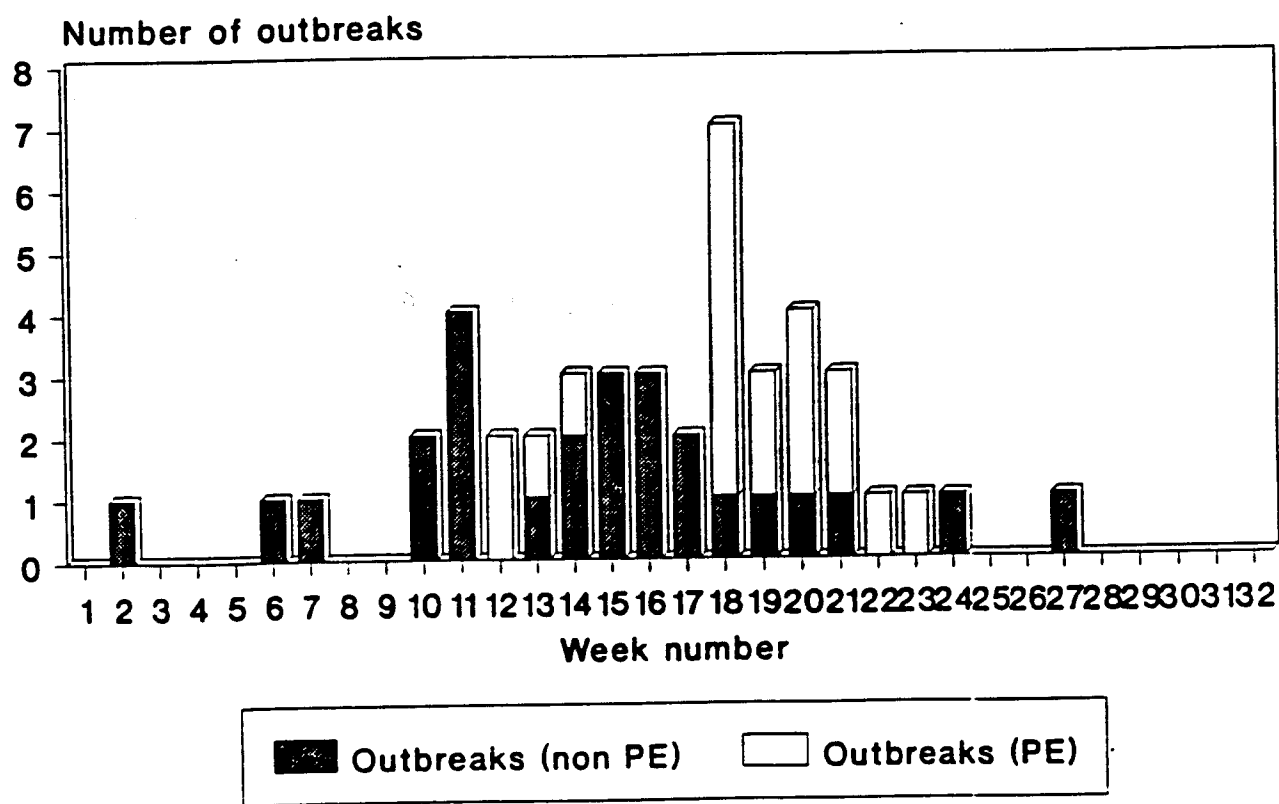


Figure 2. Weekly evolution of CSF in Belgium in 1994



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Conclusions:

- * **HIGH DENSITY REGIONS !!!**

 - secondary outbreaks in the neighborhood < 1 km

 - preventive actions

- * **CSF = contact disease**

 - hygienic infrastructure on the farm

- * **IDENTIFICATION/REGISTRATION SYSTEM**

- * **BUDGET**

- * **DESTRUCTION CAPACITY**

- * **CONTINGENCY PLAN**

- * **INFORMATION**

- * **UNDETECTED FOCI !!!!**

 - early detection of CSF virus

- * **NATIONAL SURVEILLANCE SYSTEM**

GENERAL MEASURES

Infrastructure on the farm:

- removal of dead pigs
- cleaning / disinfecting facilities on the farm
- hardened loading place
- facilities for visitors

Development of an improved identification/registration system: Sanitel-V

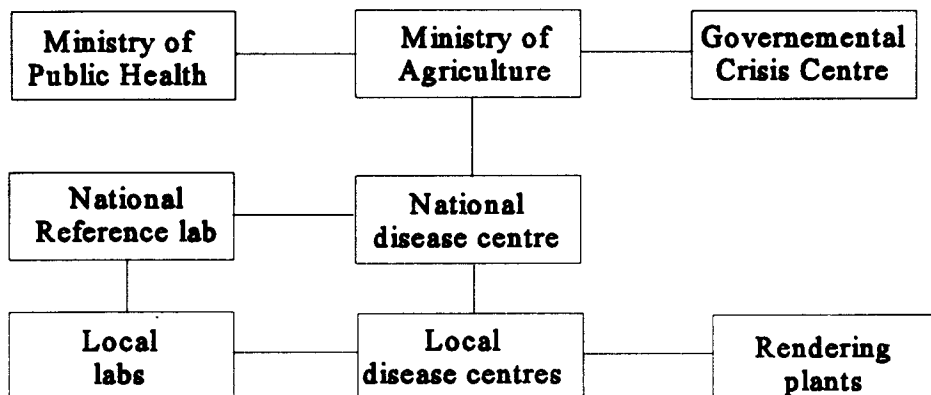
National surveillance system:

- contract veterinarian : compulsory routine visits and reports
- responsabilities for the farmer and the veterinarian



CONTINGENCY PLAN

1. Organisation of the veterinary



services

Staff -veterinary inspectors: 25
-sanitary teams: 60
-administrative and technical staff

Capacity

-2 killing machines
-4 rendering plants: min. 700
tons/day
-diagnostics: 8.000 tests



CONTINGENCY PLAN

2. Measures on (suspected) infected farms

-killing of the pigs:

- outbreak: on the farm
- preventive eradication: in the rendering plant
- market support: collection centre

-extensive sampling:

-outbreak - serology:

- 100% pighouses with ill pigs
- 20% of other pighouses

-preventive eradication:

- 10% tonsils (pools)
- 20% serology

-market support:

- 10% serology

-double cleaning and disinfection



CONTINGENCY PLAN

3. Epidemiological inquiry

3.1. Evolution of the disease within the farm

- detailed plan
- number, category and disease status of pigs per pen
- movements of pigs within the farm

3.2. Sampling scheme

- identification of samples
- projection of the results on map



3. Epidemiological inquiry

3.3. Tracing-on and tracing-back

- direct and indirect contacts
- listings
- neighbourhood farms

3.4. Risk assessment

- low risk contacts: suspicion
 - weekly clinical examination
 - sampling 30 days after contact
- high risk contacts and neighbourhood farms:
 - preventive culling
 - extensive sampling



EPIDEMIOLOGICAL ENQUIRY

I. ON THE INFECTED HOLDING

1. in the pighouses

- clinical examination
 - inspection/adspection of all pigs
 - inspection/adspection per pen
- detailed draught of the premisses and compartments of the pighouses
 - localisation of the pigs per pen
 - number, category, weight
 - clinical symptoms
 - pig movement patterns within the holding

2. Interrogation pigholder

- history of the disease: anamnesis
- treatment
- contacts
 - movements of pigs in and out of the holding
 - persons: pig-holder, vet, traders, "officials", ...
 - stale, feed, rendering plant, materials, ...
- documents: permanent inventory, leaflets of the rendering plant, invoices, bookkeeping, notes, ...

3. Sampling during killing of pigs

- scheme and planning of sampling: tonsils and blood-samples
 - 100 % in pighouses with infected pigs
 - as many as possible in other pighouses
- localisation of pigs per pen and identification of sampled pigs with ear-tags
- identification of samples
- joining samples with ear-tag
 - recording results on scheme of the premisses

II. TRACING-ON/TRACING BACK

1. Interrogation of the persons concerned

2. Documents

- official documents: permanent inventory, disinfection-booklet,
traders-booklet, "market supporting" transfers, ...
- other documents : invoices, bookkeeping, notes, ...

3. Making out of listings

- persons: pig-holder yes/no
- contacts of persons in chronological order
- contacts of vehicles in chronological order
- contacts rendering plant in chronological order
- neighbourhood holdings

4. Evaluation of contacts

- contact-holdings
- preventive slaughter

III. FOLLOW-UP OF CONTACTS

1. Official suspicion

2. Examinations

-clinical

-carcasses

-serology

-virology if preventive culling

SEROLOGY

I. ORGANISATION

1. Contactfarms.

1.1. Measures

-outside protection and surveillance zones:

-visit by S.T.

-official suspicion

-serology by S.T.

-inside protection and surveillance zones:

-important contact:

-visit by S.T.

-official suspicion

-serology by S.T.

-less important contact:

-written communication

-serology by contract vet

1.2. Serology

-sampling 1 month after contact: daily listings

-number of samples: min. 20 %

-sampled pigs are specially identified by eartags

2. Surveillance zone

- 15 days after disinfection of the infected holding
- only sows on breeding farms
- by the contract vet: listings

3. Protection zone

- 30 days after disinfection of the outbreak-farm
- sows and fattening pigs on breeding and fattening farms
- by the contract vet: listings
- number of samples: min. 20%

4. "Market supporting" destruction of pigs

- protection zone: 20% of load
- surveillance zone: 10% of load

5. Neighbouring premisses

- antigen-test
- number of samples: maximal

II. POSITIVE RESULT

- visit by S.T.
- clinical examination
- autopsy of positive pigs and wbc-count, serological
and virological examination
- second serology after 2 weeks

CONTINGENCY PLAN

4. Delimitation of zones

- initial standstill zone (20 km)

- protection zone (3 km)

- surveillance zone(10 km)

- bufferzone (10-20 km)



CSF ERADICATION STRATEGY

ACTION	ITEM
1. Crises centres	-federal coordination and crisis centre -national disease control centr -8 regional disease control centres
2. Measures on (suspected) infected farms	-killing and destruction of pigs -destruction of feedstuffs -compensation -double disinfection -eradication of rodents
3. Epidemiological inquiry	-investigation on the farm -tracing-on -tracing-back
4. Delimitation of zones -initial standstill zone (20 km) -protection zone (3 km) -surveillance zone(10 km) -bufferzone (10-20 km)	-pig/animal movement prohibition -restricted visits to farms -weekly clinical inspection of pigs -hygienic measures on farms -serology before lifting measures
5. Market support	-controlled transport -killing and destruction of pigs
6. Serological and virological examinations	-infected farms -neighbourhood and contact farms -suspicion



PREVENTIVE ERADICATIONS

1. Imports from the Netherlands
between 15.01.1997 and export
ban from restricted area (situation
10.02.97)

59 farms
15.000 pigs

2. A.I. Wanroy (97/37, 07/03/97)

7 farms
94 sows inseminated with sperm
from Wanroy

3. Contact farms with outbreaks in the
Netherlands

6 farms
3.647 pigs



Contingency plan

CSF TEMPORARY MEASURES 1997

1. Enhanced surveillance

- imports of live pigs from Germany
- imports of live pigs from the Netherlands
- import ban of live pigs from the Netherlands/parts of Germany
- collection of live pigs prohibited
- prohibition of necessity slaughters
- treatment of pigs prohibited without immediate transfer of samples for CSF diagnosis in laboratory



-preventive measures on farms

-daily registration of transports in
SANITEL V



RESTRICTION ZONES IN APPLICATION OF DIR. 80/217/EEC

1. Outbreak Rijsbergen 97/16 dd.
15.02.1997
2. Outbreak Soerendonk 97/87 dd.
08.04.1997 + outbreak Gastel
97/163 dd. 09.05.1997
3. Outbreak Baarle-Nassau 97/88 dd.
09.04.1997
4. Outbreak Schoondijke 97/387 dd.
27.08.1997
5. Outbreak Gastel 97/163 dd.
09.05.1997
6. Outbreak Tungelroy (Weert) 97/398
dd. 05.09.1997



OUTBREAKS IN BELGIUM 1997

1. Outbreaks

nr.	confirmation date	stamping out date	number of pigs	number of ill p.	type of farm
97/1	30/6	1 + 2/7	5.805	928	mixed
97/2	2/7	3/7	735	10	fattening
97/3	2/7	3/7	258	5	fattening
97/4	2/7	3/7	640	10	fattening
97/5	2/7	3/7	277	10	fattening
97/6	4/7	5/7	1.405	2	mixed
97/7	10/7	5/7	1.153	0(prev.)	mixed
97/8	10/7	5/7	153	0(prev.)	mixed



OUTBREAKS IN BELGIUM 1997

2. Epidemiology

nr.	origin of infection
97/1	Transport contact with the Netherlands
97/2	Direct contact: delivery of piglets
97/3	Direct contact: delivery of piglets
97/4	Direct contact: delivery of piglets
97/5	Direct contact: delivery of piglets
97/6	unkwown
97/7	Indirect contact and neighbourhood
97/8	Indirect contact and neighbourhood



OUTBREAKS IN BELGIUM 1997

3. Risk assessment

	NUMBER OF FARMS	NUMBER OF PIGS	COSTS
OUTBREAKS	8	9.594	+/- 0,042 bill BEF
PREV.ERADICATION	56	36.437	+/- 0,176 bill BEF
TOTAL		46.031	+/- 0.218 bill BEF

PIG/FARM
1198
650

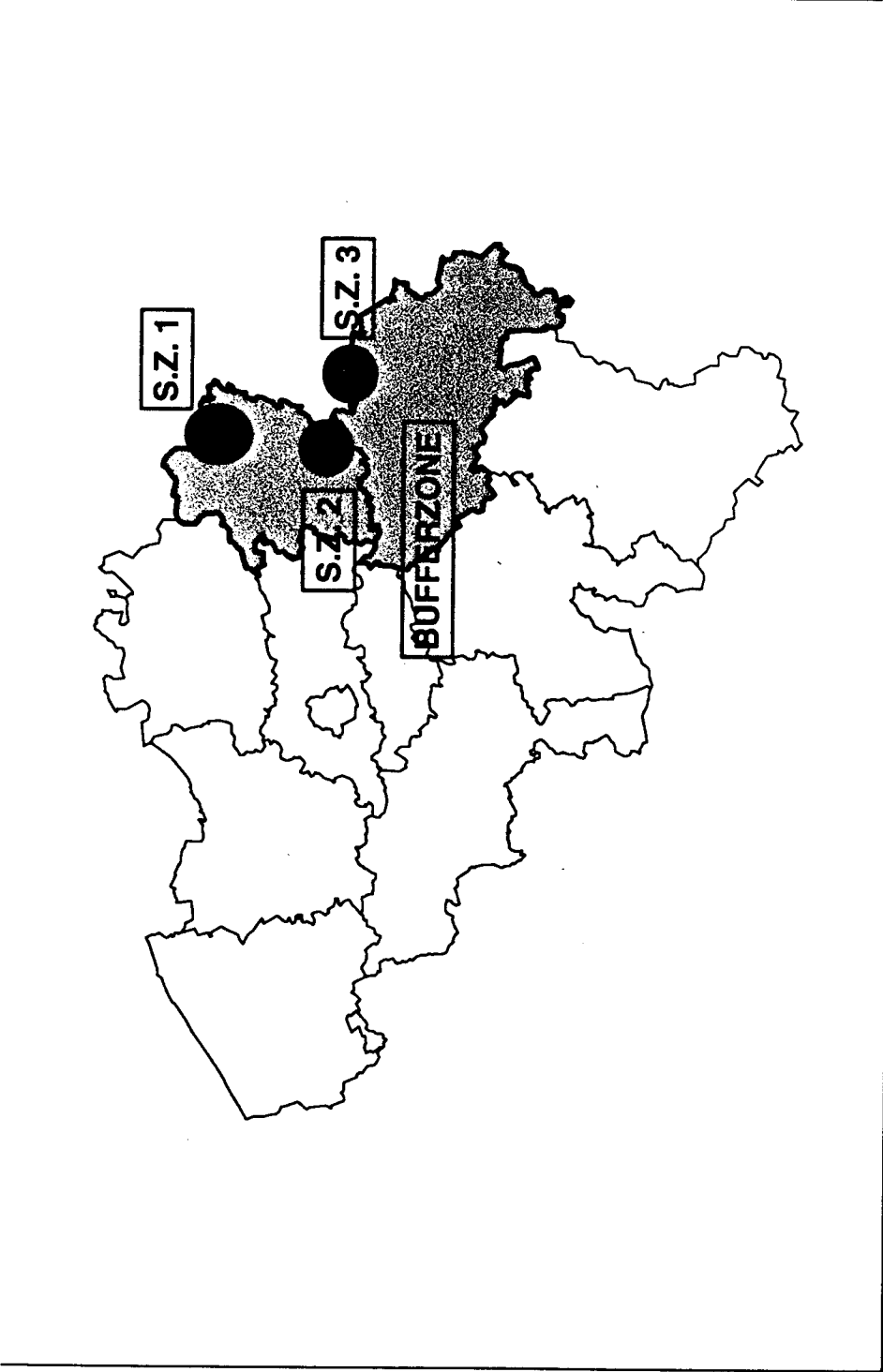
High risk: 56 farms

- contact farms
- neighbourhoodfarms
- preventive eradications (9 partially)

Low risk: 65 farms

- official suspicion
- serology after 30 days





MINISTRY OF AGRICULTURE



Veterinary Services

MEASURES IN RESTRICTION ZONES

MEASURES	P.Z.	S.Z	B.Z.
1. Prohibitions			
-transport			
-pigs	+	+	+ /-
-ruminants	+	-	-
-“open air” pig husbandry	+	-	-
-spread of pigmanure	+	+	-
-slaughter of pigs	+	+	-
-entrance of farms and pighouses	+	+	-
2. Obligations			
-warning sign at the entrance of a farm	+	-	-
-no free admittance to a farm (red-white chain)	+	+	-
-vistors log	+	+	-
-weekly visit and inspection by the vet	+	+	-
-cleaning and disinfection measures for:			-
-vehicles leaving the farm	+	+	-
-vehicles leaving the zone	+	+	-



CONCLUSIONS

CSF eradication in high density area
difficult but feasible if:

- adequate organisation and
infrastructure
- expertise
- financial means

Preventive structural measures

New strategies?



VETERINARY SERVICES

Department

Agriculture	Veterinary services
Public Health	Meat inspection
Interior	Provincial Governor Municipalities: Mayor Police
Regions:	Rendering plants

MINISTRY OF AGRICULTURE

DG 5

VETERINARY SERVICES

Central Office

- . **Chief Veterinary Officer**
- . **Veterinary Directors**
- . **Veterinary Inspectors**

External Services

- . **Regional Coordinators (2)**
- . **14 Veterinary Districts**

Veterinary Inspector +

- . **Deputies**
- . **Sanitary teams**
- . **Admitted veterinarians**